THE CONSTRUCTACONS VERTICALLY-INTEGRATED PROJECTS (VIP) TEAM

TEAM TITLE: Constructacons VIP Team

GOALS: To bring modern research in industrial and robotic automation to the construction site for the purposes of improving the efficiency, safety, and monitoring of building construction.

TECHNOLOGIES: Embedded computing, computer vision, automation, robotics, machine learning, artificial intelligence, data analytics, data visualization, and user interface design.

RESEARCH ISSUES: Autonomous navigation, control, and manipulation for robots; Coordinated control of interacting robots; Computer vision for reconstruction of worksite geometry; Computer vision for obstacle detection, object classification, and planning; Machine learning for process control; Data analytics to process activities;

TEAM ADVISOR: Patricio Vela (ECE).

DESIRED DISCIPLINES & PREPARATION:
EE, CmpE, CS – Background/interest in embedded computing/systems, control theory, computer vision, automation, artificial intelligence, machine learning, robotics.
CmpE, CS – Background/interest in databases, wireless communication, data visualization, human-robot interaction.
CE – Background/interest in robotics, automation, construction engineering, advanced sensing.

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